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Arrhythmias

THE SIGNIFICANCE OF BIFASICULAR BLOCK (RIGHT BUNDLE BRANCH BLOCK PLUS LEFT POSTERIOR FASCICULAR BLOCK) IN ADULTS <40 YEARS OLD

Moderated Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 3:45 p.m.-4:30 p.m.

Session Title: Arrhythmias: Utililty of ECG for Patients at Risk of SCD
Abstract Category: 6. Arrhythmias: Other
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Introduction: A bifascicular block involving the right bundle branch (RBBB) and left posterior fascicle (LPFB) is a rare ECG abnormality thought to imply significant disease of the cardiac conduction system. We sought to retrospectively establish a cohort with this ECG abnormality and evaluate for progression of conduction system disease.

Methods: This cohort was created by interrogating our ECG database for all ECGs with RBBB and right axis deviation stored at Wilford Hall Ambulatory Surgical Center in the last decade. The ECGs were reviewed by 2 authors to insure they met current ACC coding recommendations for RBBB and LPFB. Electronic medical records, the Social Security death database, and pacemaker manufacturer databases were reviewed to determine demographical data, indications for ECG acquisition, pre-existing or subsequently diagnosed diseases, pacemaker placement or death. Patients with known congenital heart disease or prior cardiac surgery/ablation were excluded.

Results: 26 patients (3 females and 23 males) with an average age of 24 years were included in the study. The ECGs were predominately (85%) performed in the outpatient setting in asymptomatic individuals (62%). The most common indication for obtaining the ECG was flight physicals (54%). After an average follow-up of 6.1 years, all subjects are still alive and only 2 subjects underwent permanent pacemaker implantation. 27% of the patients were found to have cardiovascular pathology. While a higher proportion of disease was present when the axis was ≥105 degrees (50% vs. 17%, p=0.15), the sample size was small and this did not reach statistical significance. The subjects with cardiovascular symptoms had a non-significant, lower rate of pathology than the asymptomatic patients (22% vs. 31%, respectively, p=1.0)

Conclusion: Here we report the largest cohort of bifasicular block involving the right bundle and left posterior fascicle to date. While only 8% required pacemaker implantation and no subjects died during a 6 year follow-up period, this was a young cohort. In this population, 1/4th of the subjects were found to have significant cardiovascular pathology.